

*EXPRESS EV 438075021 CIS*  
**PATENT COOPERATION TREATY**

From the  
 INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Re: JPL PTO

25 JAN 2005

PCT

To:

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Patent Department Administration-Hannover

**NOTIFICATION OF TRANSMITTAL OF  
 THE INTERNATIONAL PRELIMINARY  
 EXAMINATION REPORT**

(PCT Rule 71.1)

Date of mailing (day/month/year)	15.10.2004 /PER vsw
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Applicant's or agent's file reference  
 PD020065 ✓

**IMPORTANT NOTIFICATION**

International application No. PCT/EP 03/07671	International filing date (day/month/year) 16.07.2003	Priority date (day/month/year) 29.07.2002
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Applicant  
 THOMSON LICENSING S.A.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/B/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international  
 preliminary examining authority:



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25 JAN 2003

## PATENT COOPERATION TREATY

PCT

REC'D 18-OCT-2004

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**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
**(PCT Article 36 and Rule 70)**

Applicant's or agent's file reference PD020065	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP 03/07671	International filing date (day/month/year) 16.07.2003	Priority date (day/month/year) 29.07.2002
International Patent Classification (IPC) or both national classification and IPC G06F17/30		
Applicant THOMSON LICENSING S.A.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 2 sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the opinion</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>

Date of submission of the demand 17.10.2003	Date of completion of this report 15.10.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Bykowski, A Telephone No. +31 70 340-4565



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP 03/07671

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-11 as originally filed

**Claims, Numbers**

1-11 received on 26.07.2004 with letter of 26.07.2004

**Drawings, Sheets**

1/6-6/6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

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5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

**see separate sheet**

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	1-4,6-10,12-13
Inventive step (IS)	Yes: Claims	
	No: Claims	1-13
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/07671

**Re Item I**

The amendments filed with the letter dated 26.07.2004 introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT. The amendments concerned are the following: the amended claim 1 corresponds to the features of claims 1, 3 and 5 of the original application. Therefore, the scope of the claim covers all methods including the features of claims 1, 3 and 5. At least one case, namely the case of a method covered by the amended claim 1, but storing none of: descriptor numbers, relative- and absolute- positions of portions of a common format within the descriptors, was not disclosed in the application as filed. Indeed, claim 5 of the original application was drafted as depending on claim 4, therefore storing the next upper hierarchical level implies storing descriptor numbers and relative and/or absolute positions of portions of a common format within the descriptors. The disclosure in the description links these features in the same way (see p. 3, last par. and p. 4, first par.).

Pursuant to Rule 70.2(c) PCT, further examination is carried out on the application disregarding the amendments filed with the letter dated 26.07.2004, i.e., on the application as filed.

**Re Item V**

The following document (D1) is referred to in this communication:

D1: FLORESCU D. ET AL: 'A Performance Evaluation of Alternative Mapping Schemes for Storing XML Data in a Relational Database', INRIA TECHNICAL REPORT NUMBER 3680, May 1999, XP002168318, Retrieved from the Internet: <URL:[http://www-caravel.inria.fr/Fmbrepubs\\_dana.html](http://www-caravel.inria.fr/Fmbrepubs_dana.html)> [retrieved on 2001-05-22]

In order to formulate the opinion on the questions mentioned in Article 33(1), the following objections of clarity are made, Article 6 PCT.

According to the description (p. 2, l. 32-33), there is a plurality of common formats, whereas according to the claim 1, it is unclear whether there is a single or a plurality of common formats. The phrase "a common format"

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/07671

used in claim 1 should be reformulated so that the claims refer to the possibility of coexistence of a plurality of different common formats.

Claim 3 attempts to define the subject-matter in terms of the result to be achieved. Such a definition is only allowable under the conditions elaborated in the Guidelines C-III, 4.7. In this instance, however, such a formulation is not allowable because it appears possible to define the subject-matter in more concrete terms, viz. in terms of how the effect is to be achieved. Claim 3 should clarify which is the stored information and how the descriptor structure is recovered.

The definition of the technical term "index" employed in claims 6-7 does not correspond to the meaning generally accepted in the field in question, contrary to the requirements of Rule 35(12) EPC. Generally accepted in the field of relational databases, an "index" is a structure containing only redundant information with respect to the data stored (and aiming at speeding up some operations on the data) and thus does not allow storing any additional information. Should the applicant want to enforce the specific meaning of the term "index" (a structure, which allows storing additional information), copying the relevant definition given by the applicant in the description (p. 4) into the claim is necessary. See also the Guidelines, C-III, 4.2.

The claims can however be understood in the light of the description, and will be further assessed according to that understanding.

The document D1 discloses (the references in parentheses applying to this document):

- a method for mapping a hierarchical data format comprising descriptors to a relational database management system (p. 3, l. 22),
- separating the descriptors into portions of common format (implicit, see p.5, l. 4- 8 and figures 2-4), and
- storing the portions of common format in relations in the relational database (Sect. 3.1.1, first line and Sect. 3.2.1, first line).

The subject-matter of claim 1 is therefore not new (Article 33(2) PCT).

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International application No. PCT/EP 03/07671

The independent claims 12 and 13 appear to correspond respectively to a subsystem and the whole apparatus of the system implementing the method of claim 1. Hence, they are also disclosed by D1.

The subject-matter of claims 12 and 13 is therefore not new (Article 33(2) PCT).

Dependent claims 2-11 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to novelty or inventive step.

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Claims

1. Method for mapping a hierarchical data format with descriptors (1, 10, 11) to a relational database management system, including the steps of:
  - separating the descriptors (1, 10, 11) into portions of a plurality of common formats;
  - storing the portions of the plurality of common formats in relations (20, 21, 22...) in the relational database; and
  - storing information describing the descriptor structure in the relations (20, 21, 22...) together with the portions of the plurality of common formats;  
wherein the information describing the descriptor structure includes an indicator for the next upper hierarchical level of portions of a common format within the descriptors (1, 10, 11).
2. Method according to claim 1, wherein the information describing the descriptor structure includes descriptor numbers and relative and/or absolute positions of portions of a common format within the descriptors (1, 10, 11).
3. Method according to claim 1 or 2, further comprising the step of providing independent relations (22, 23,...,32, 33,...) for the common formats.
4. Method according to one of claims 1 to 3, further comprising the step of storing a descriptor index (40) in the relational database, the descriptor index (40) allowing to store additional information for every descriptor.
5. Method according to claim 4, characterized in that the descriptor index (40) comprises at least descriptor numbers, absolute positions of the descriptors (1, 10, 11) within the relations (20, 21, 22...) and/or unique identifiers (4) for the descriptors (1, 10, 11).
6. Method according to anyone of the preceding claims, characterized in that the hierarchical data format comprising

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descriptors (1, 10, 11) corresponds to the Extensible Markup Language.

7. Method according to anyone of the preceding claims,  
5 characterized in that the common formats comprise at least elements, attributes and text.

8. Method according to claim 7, characterized in that the common format text is divided into string values and integer  
10 values.

9. Method according to claim 7 or 8, characterized in that the common formats further comprise namespace information (2).

15 10. Database model for mapping a hierarchical data format comprising descriptors (1, 10, 11) to a relational database management system, characterized in that it uses a method according to any of the preceding claims.

20 11. Apparatus for reading from and/or writing to recording media, characterized in that it uses a method according to any of claims 1-9 or a database model according to claim 10 for mapping a hierarchical data format comprising descriptors (1, 10, 11) to a relational database management system.

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